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STRUCTURE FILE UPDATES: 12 AUG 2003 HIGHEST RN 565411-31-6

DICTIONARY FILE UPDATES: 12 AUG 2003 HIGHEST RN 565411-31-6

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:

<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

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FILE COVERS 1907 - 13 Aug 2003 VOL 139 ISS 7

FILE LAST UPDATED: 12 Aug 2003 (20030812/ED)

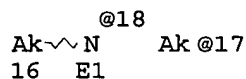
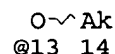
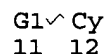
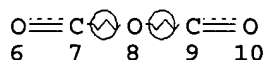
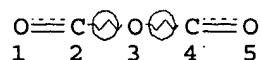
This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d que

L1 (48431)SEA FILE=REGISTRY ABB=ON PLU=ON POLYIMIDE/PCT

L2 STR

KOROMA EIC1700



VAR G1=13/18/17

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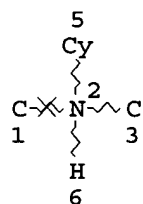
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GGCAT IS PCY UNS AT 12
GGCAT IS SAT AT 14
GGCAT IS SAT AT 16
GGCAT IS UNS AT 17
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE

L3 1 SEA FILE=REGISTRY SUB=L1 SSS FUL L2
L4 STR



NODE ATTRIBUTES:

NSPEC IS RC AT 1
NSPEC IS RC AT 2
NSPEC IS RC AT 3
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE

L5 48437 SEA FILE=REGISTRY ABB=ON PLU=ON POLYIMIDE/PCT
L7 2 SEA FILE=REGISTRY SUB=L5 SSS FUL L4

KOROMA EIC1700

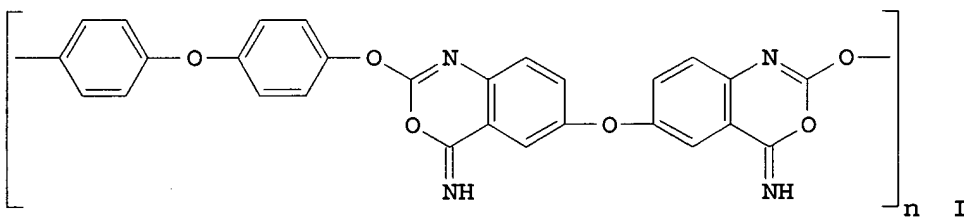
L8 1 SEA FILE=CAPLUS ABB=ON PLU=ON L3
 L9 1 SEA FILE=CAPLUS ABB=ON PLU=ON L7
 L10 2 SEA FILE=CAPLUS ABB=ON PLU=ON L8 OR L9

=> d ibib abs hitstr ind total l10

L10 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN
 ACCESSION NUMBER: 1980:408757 CAPLUS
 DOCUMENT NUMBER: 93:8757
 TITLE: Thermostable heterocyclic polymers
 INVENTOR(S): Chernikhov, A. Ya.; Yakovlev, M. N.; Lysova, V. B.;
 Gefter, E. L.; Shmagina, N. N.
 PATENT ASSIGNEE(S): USSR
 SOURCE: Ger. Offen., 53 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2825413	A1	19800117	DE 1978-2825413	19780609
US 4229560	A	19801021	US 1978-910298	19780530
JP 56002088	B4	19810117	JP 1978-72680	19780615
JP 55000716	A2	19800107		
PRIORITY APPLN. INFO.:			DE 1978-2825413	19780609

GI



AB Thermostable heterocyclic polymers are prepd. by reactions of polysubstituted nitrile or ethynyl compds. with polyfunctional compds. Thus, 3.0 g 3,3'-dicyano-4,4'-diisocyanatodiphenyl ether and 2.0 g 4,4'-dihydroxydiphenyl ether were heated to 200.degree. over 1.5 h and then heated 1 h at 200.degree., 0.5 h at 250.degree., and 0.5 h at 300.degree., giving a 98.5% yield of a brown solid polymer (I) [73539-21-6] which showed 1.8% wt. loss after heating 100 h in air at 300.degree..

IT 73600-48-3P

RL: IMF (Industrial manufacture); PREP (Preparation)
 (manuf. of heat-resistant)

RN 73600-48-3 CAPLUS

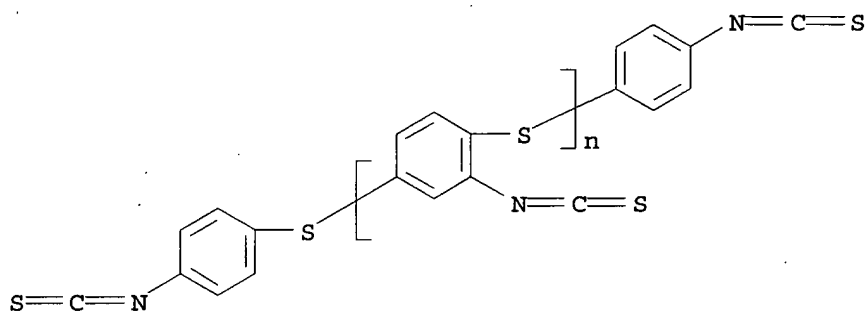
CN Poly[[2,3-dihydro-1,3-dioxo-2-(4,4,6,6-tetrahydro-2,4,4,6,6-pentaphenyl-1,3,5,2,4,6-triazatriphosphorin-2(2H)-yl)-1H-isoindole-4,7-diyl]iminocarbonyloxy(2,3,5,6-tetracyano-1,4-phenylene)oxycarbonylimino], .alpha.-[[[(2,3,5,6-tetracyano-4-hydroxyphenoxy) carbonyl] amino]-.omega.-[2,3-dihydro-1,3-dioxo-7-[[[(2,3,5,6-tetracyano-4-hydroxyphenoxy) carbonyl] amino]-2-(4,4,6,6-tetrahydro-2,4,4,6,6-pentaphenyl-1,3,5,2,4,6-triazatriphosphorin-2(2H)-yl)-1H-isoindol-4-yl]-, polymer with .alpha.-(4-isothiocyanatophenyl)-.omega.-[(4-isothiocyanatophenyl)thio]poly[thio(2-isothiocyanato-1,4-phenylene)] (9CI) (CA INDEX NAME)

CM 1

CRN 73600-47-2

CMF (C7 H3 N S2)n C14 H8 N2 S3

CCI PMS



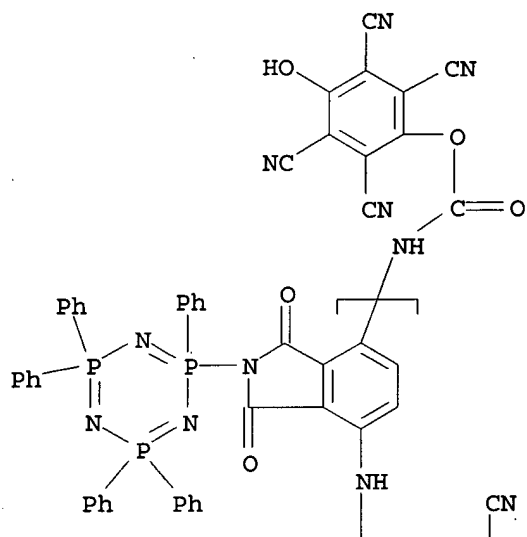
CM 2

CRN 73600-46-1

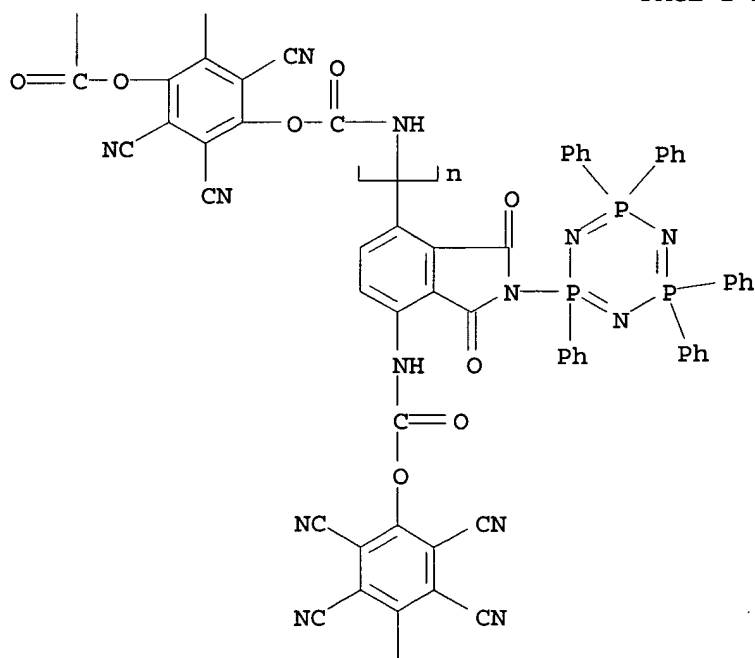
CMF (C50 H29 N10 O6 P3)n C60 H31 N14 O8 P3

CCI PMS

PAGE 1-A



PAGE 2-A



OH

IC C08G073-06; C08G077-32
CC 35-3 (Synthetic High Polymers)
ST heterocyclic heat resistant polymer; polybenzoxazine heat resistance
IT Heat-resistant materials
(heterocyclic polymers)
IT Polyamides, preparation
Polyesters, preparation
Polyimides, preparation
Polyoxyphenylenes
Siloxanes and Silicones, preparation
RL: IMF (Industrial manufacture); PREP (Preparation)
(manuf. of heat-resistant, contg. heterocyclic groups)
IT Polymerization
(of polysubstituted ethynyl and nitrile compds. with polyfunctional
compds., heat-resistant heterocyclic polymers from)
IT Carboranes
RL: IMF (Industrial manufacture); PREP (Preparation)
(poly-, manuf. of heat-resistant, contg. heterocyclic groups)
IT 1187-12-8DP, polymers with bis(aminoethynylphenyl)propane and
isothiocyanato-terminated isothiocyanic acid polymethylenephenylene ester
9016-87-9DP, isothiocyanato-terminated, polymers with
diaminodicyanoethylene and bis(aminoethynylphenyl)propane 73417-40-0DP,
polymers with oxydicyanophenylene-siloxane copolymers 73539-21-6P
73539-97-6P 73600-48-3P 73600-51-8P 73600-54-1P
73600-57-4P 73600-59-6P 73600-61-0P 73600-64-3P 73600-67-6P
73600-71-2P 73600-74-5P 73600-81-4DP, polymers with
(cyanohydroxyphenyl)siloxanes 73603-44-8DP, polymers with
diaminodicyanoethylene and isothiocyanato-terminated isothiocyanic acid
polymethylenephenylene ester 73613-40-8P 73613-44-2P 73613-48-6P
73614-20-7P 73614-21-8P 73614-56-9P 73614-59-2P 73614-65-0P
73614-69-4P 73614-72-9P 73614-80-9P 73614-86-5P 73614-91-2P
73614-95-6P 73614-97-8P 73615-03-9P 73615-11-9P 73615-13-1P
73615-16-4P 73615-19-7P 73615-21-1P 73629-28-4P 73629-30-8P
73629-33-1P 73629-36-4P 73629-38-6P 73650-29-0P 73655-78-4P
73716-72-0P 73716-73-1P 74009-36-2P
RL: IMF (Industrial manufacture); PREP (Preparation)
(manuf. of heat-resistant)

L10 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1970:477843 CAPLUS

DOCUMENT NUMBER: 73:77843

TITLE: Thermally stable film-forming polymers

INVENTOR(S): Yoda, Naoya; Kurihara, Masaru; Toyama, Shunroku;
Dogoshi, Noriaki; Hagiwara, Yoshichi; Itoga, Masaaki;
Fujita, Saburo; Yamoto, Hirotsuke

PATENT ASSIGNEE(S): Toyo Rayon Co., Ltd.

KOROMA EIC1700

SOURCE: Ger. Offen., 49 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1811588	C3	19730104	DE 1968-1811588	19681129
NL 6817318	A	19690606	NL 1968-17318	19681203
GB 1237004	A	19710630	GB 1968-1237004	19681203
FR 1604873	A	19720417	FR 1968-1604873	19681203
PRIORITY APPLN. INFO.:			JP 1967-77575	19671204
			JP 1968-16504	19680315
			JP 1968-16505	19680315

GI For diagram(s), see printed CA Issue.

AB Polymers contg. units of general structure I, where R is a bivalent group contg. 2 noncondensed benzene rings, X is a trimellitic acid residue, Y = O, S, CO₂, or substituted N, and Z is a tetravalent group contg. 2 noncondensed benzene rings, were prepd. by heating the corresponding polyamic acids first to a temp. between the primary and secondary transition points (T₁ and T₂) and then to a temp. between the secondary transition point and the decompn. temp. Thus, a mixt. of 3,3'-diamino-4,4'-biphenol 10.9, N-methylpyrrolidinone 200, and trimellitic anhydride chloride 21 parts in 10 parts pyridine was stirred for 2 hr at -15 to -20.degree., the temp. increased to room temp., 21.8 parts pyromellitic dianhydride and 29.9 parts (p-H₂NC₆H₄)₂CH₂ added, and the mixt. stirred for 3 hr at room temp. to give a soln. (II) of a polyamic acid of T₁ = 110.degree. and T₂ = 280.degree.. II was poured onto a glass plate and dried 1 hr at 80.degree. and 3 hr at 100.degree. to give a film which was heated 5 min at 185.degree. and 15 min at 378.degree. to yield a poly(imide benzoxazole) film of 96% elongation.

IT 28210-03-9P

RL: PREP (Preparation)
 (prepn. of)

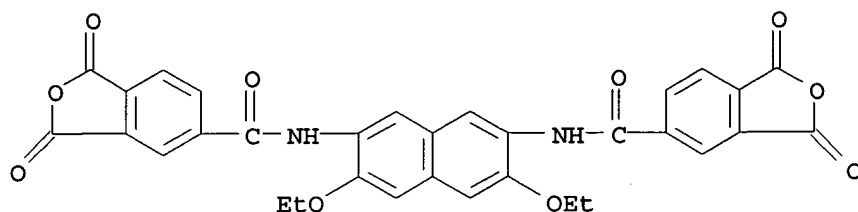
RN 28210-03-9 CAPLUS

CN Phthalic anhydride, 4,4'-[(3,6-diethoxy-2,7-naphthylene)bis(iminocarbonyl)]di-, polymer with p-phenylenediamine (8CI) (CA INDEX NAME)

CM 1

CRN 47853-11-2

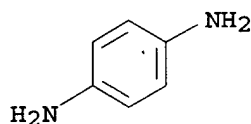
CMF C32 H22 N2 O10



CM 2

CRN 106-50-3

CMF C6 H8 N2



IC C08G

CC 35 (Synthetic High Polymers)

ST thermally stable polymers; trimellitic anhydride acid chloride; pyromellitic anhydride polymers; polyimides; benzoxazoles imides polymeric; polybenzoxazole imides; polybenzothiazole imides; polybenzimidazole imides; polybenzoxazinone imides

IT 1,2,4,5-Benzenetetracarboxylic 1,2:4,5-dianhydride, polymer with (aminophenoxy)-o-phenylenediamine, 4,4'-[(3,3'-dimercapto-4,4'-biphenylene)bis(iminocarbonyl)]diphthalic anhydride and 4,4'-oxydianiline

Aniline, 4,4'-oxydi-, polymer with (aminophenoxy)-o-phenylenediamine, 1,2,4,5-benzenetetracarboxylic 1,2:4,5-dianhydride and 4,4'-[(3,3'-dimercapto-4,4'-biphenylene)bis(iminocarbonyl)]diphthalic anhydride

Phthalic anhydride, 4,4'-[(3,3'-dimercapto-4,4'-biphenylene)bis(iminocarbonyl)]di-, polymer with (aminophenoxy)-o-phenylenediamine, 1,2,4,5-benzenetetracarboxylic 1,2:4,5-dianhydride and 4,4'-oxydianiline

Phthalic anhydride, 4,4'-[[3,3'-bis(cyclohexyloxy)-4,4'-biphenylene]bis(iminocarbonyl)]di-, polymer with diaminopyridine

Phthalic anhydride, 4,4'-[carbonylbis[(2-hydroxy-p-phenylene)iminocarbonyl]]di-, polymer with diaminopyridine

Poly[imino(2-hydroxy-p-phenylene)imino(3-hydroxy-p-phenylene)iminocarbonyl(carboxyphenylene)carbonylimino-4,4'-biphenyleneiminocarbonyl(carboxyphenylene)carbonyl]

Poly[imino-p-phenyleneiminocarbonyl(carboxyphenylene)carbonylimino(3,6-diethoxy-2,7-naphthylene)iminocarbonyl(carboxyphenylene)carbonyl]

Poly[imino-p-phenyleneiminocarbonyl(carboxyphenylene)carbonylimino(3,6-dihydroxy-2,7-naphthylene)iminocarbonyl(carboxyphenylene)carbonyl]

KOROMA EIC1700

Poly[iminocarbonyl (carboxycyclohexylene) carbonylimino (3,3'-dimethoxy-4,4'-biphenylylene) iminocarbonyl (carboxycyclohexylene) carbonylimino-4,4'-biphenylylene]

Poly[iminocarbonyl (carboxycyclohexylene) carbonylimino-4,4'-biphenylyleneiminocarbonyl (carboxycyclohexylene) carbonylimino (2-hydroxy-p-phenylene) isopropylidene (3-hydroxy-p-phenylene)]

Poly[iminocarbonyl (carboxyphenylene) carbonylimino (3,3'-dibutoxy-4,4'-biphenylylene) iminocarbonyl (carboxyphenylene) carbonylimino-4,4'-biphenylylene]

Poly[iminocarbonyl (carboxyphenylene) carbonylimino-4,4'-biphenylyleneiminocarbonyl (carboxyphenylene) carbonylimino (2-hydroxy-p-phenylene) methylene (3-hydroxy-p-phenylene)]

Poly[oxy (3-hydroxy-p-phenylene) iminocarbonyl (carboxycyclohexylene) carbonylimino-1,4-cyclohexyleneiminocarbonyl (carboxycyclohexylene) carbonylimino (2-hydroxy-p-phenylene)]

Poly[oxy-p-phenyleneiminocarbonyl (carboxyphenylene) carbonylimino (2-hydroxy-p-phenylene) thio (3-hydroxy-p-phenylene) iminocarbonyl (carboxyphenylene) carbonylimino-p-phenylene]

Poly[oxy-p-phenyleneiminocarbonyl (carboxyphenylene) carbonylimino (3,3'-dihydroxy-4,4'-biphenylylene) iminocarbonyl (carboxyphenylene) carbonylimino-p-phenylene]

Poly[oxy-p-phenyleneiminocarbonyl (carboxyphenylene) carbonylimino (3,3'-dimethoxy-4,4'-biphenylylene) iminocarbonyl (carboxyphenylene) carbonylimino-p-phenylene]

Poly[pyridinediyliminocarbonyl (carboxyphenylene) carbonylimino (2-hydroxy-p-phenylene) carbonyl (3-hydroxy-p-phenylene) iminocarbonyl (carboxyphenylene) carbonylimino]

Poly[pyridinediyliminocarbonyl (carboxyphenylene) carbonylimino [3,3'-bis(cyclohexyloxy)-4,4'-biphenylylene] iminocarbonyl (carboxyphenylene) carbonylimino]

Pyridine, diamino-, polymer with 4,4'-[[3,3'-bis(cyclohexyloxy)-4,4'-biphenylylene]bis(iminocarbonyl)]diphthalic anhydride

Pyridine, diamino-, polymer with 4,4'-[carbonylbis[(2-hydroxy-p-phenylene)iminocarbonyl]]diphthalic anhydride

o-Phenylenediamine, (aminophenoxy)-, polymer with 1,2,4,5-benzenetetracarboxylic 1,2:4,5-dianhydride, 4,4'-[(3,3'-dimercapto-4,4'-biphenylylene)bis(iminocarbonyl)]diphthalic anhydride and 4,4'-oxydianiline

RL: PREP (Preparation)
(prepn. of)

IT	26063-84-3P	26428-29-5P	26500-29-8P	28207-02-5P	28207-03-6P
	28207-04-7P	28207-05-8P	28207-70-7P	28207-71-8P	28207-72-9P
	28207-86-5P	28207-87-6P	28207-88-7P	28207-89-8P	28207-90-1P
	28207-92-3P	28207-93-4P	28207-94-5P	28207-95-6P	28207-96-7P
	28207-97-8P	28207-98-9P	28207-99-0P	28208-00-6P	28210-03-9P
	28377-67-5P	28378-19-0P	28378-20-3P	28475-81-2P	

RL: PREP (Preparation)
(prepn. of)